REMARKS

In regard to the Examiner's Office Action of August 13, 2004, Applicants hereby provide the following response to the Examiner's considerations.

In regard to the drawings and the use of the symbol "dx" on page 37 line 8, Applicants would indicate that this particular symbol "Dx" has now been eliminated. It will be noted that the drawings themselves indicate the direction of the lines in the figure.

Now, regarding the Fig. 3 characters "NO PAN" and the characters "KO PAN" in Fig. 3, these have now been corrected to indicate these characters as "NOP AN" and "KOP AN". These symbols indicate in Fig. 3, the multiplicity of application programs and in the Server Farm 10A, and respectively the multiplicity of application programs in the Server Farm 10K. An amended replacement-drawing sheet is attached which includes all the figures appearing on the immediate prior version of the sheet. The replacement sheet is labeled *"REPLACEMENT SHEET"* (*End Of Page Header*) so as not to obstruct any portion of the drawing figures.

The Examiner has rejected claims 1-6, 8, 10-11 for indefiniteness, under 35 USC 112, second paragraph, basically on the matter of insufficient antecedent bases. As a result, Applicants have now amended each of these claims in order to provide prior indications of those factors which Examiner indicated as requiring a prior antecedent. As a result, Examiner should now withdraw his objection under 35 USC Article 112, in this regard.

Claims 1-11 have been rejected by the Examiner under 35 USC, Article 102(e) as being anticipated by the Blumenau reference, U.S. Patent 6,665,714. At this juncture, Applicants

would traverse the Examiner's consideration on this subject, as will be evidenced by the following discussion herein.

A brief summary of the Blumenau reference will be seen in the attached Appendix I to indicate how Blumenau <u>does not</u> address any method for designing and configuring a Server Farm or Farms which are most efficiently tailored to each customer's (customer profile) specialized requirements.

<u>REGARDING APPLICANTS' CLAIM 1</u>: Here, the Examiner states that Blumenau teaches a method to configure Servers and associated support apparatus established at one or more sites to satisfy the requirement of a given customer's profile, and especially regarding clause (a) calculating a basic solution for establishing the appropriate number of Servers and types of associated support apparatus for each site and for each Server Farm.

Here, Applicants will address each set of references as to the columns in Blumenau that Examiner has cited as teaching the same subject matter.

(i) At Blumenau column 6, lines 35-67: Note that Blumenau indicates that configuration data is used to manage the <u>allocation of volumes</u> to different hosts which may be provided by a system administrator of the network. The system administrator tracks the host devices that are coupled to the network and the available volumes at the storage system. As a new host device enters the network, the system administrator allocates storage system volumes to the host. . . . The system administrator may include a Graphical User Interface to enable users to monitor the availability and assignment of volumes to different hosts in the

network. . . . As each device enters the network, it queries the network to identify other devices coupled to the network. Each device that responds to the query returns one or more identifiers to the device.

To contravene Examiner's thinking on this subject, it should be noted that Applicants' claim 1(a) involves: --- calculating a basic solution for establishing the appropriate number of servers and types of associated support apparatus for each site and for each Server Farm.

There is nothing in this aspect of Blumenau which teaches the calculation of a basic solution, or for establishing the appropriate number of servers for each site and for each Server Farm, nor does it involve the types of associated support apparatus (which is much more extensive than the "limited" aspect of mere disk volumes, as is indicated by the Blumenau reference).

(ii) Examiner cites column 21, lines 45-60. Here, Blumenau provides a utility to provide additional identification information pertaining to hosts and host pairs that are logged into a storage system. . . . This can then be used to view and manage host pairs and to configure storage volume assignments.

Quite contrarily, Applicants' claim 1(a) is not concerned with mere storage volume assignments, Applicant is concerned with a basic solution for establishing the appropriate number of servers for each site

and for each Server Farm. Nothing here in Blumenau teaches that subject matter.

(iii) Examiner cites Blumenau column 26, lines 1-20: it will be seen that this involves <u>shared and assigned storage volumes</u> in a storage system which has been assigned to more than one host. A configuration database storage volume icon 1545 represents the particular storage volume which stores the configuration database (called a Volume Configuration Management database, or VCM). The use of different icons to represent various types of network devices and various types of storage volumes allows a detailed description of a storage network to be effectively communicated to a user.

Again here, it should be noted that there is nothing here which teaches the calculation of a basic solution for establishing the appropriate number of servers for each site and for each Server Farm, plus the types of associated support apparatus in a Server Farm system.

(iv) Here, Examiner cites Blumenau column 17, lines 36-45: Here, Blumenau makes a very generalized, all-encompassing statement which has no direct relevance to Server Farms and Server Metafarms. Blumenau merely states that he relates to an exemplary system, wherein a host gains access to data at a storage system which may be applied to any system where a resource is shared by multiple devices. This type of generalized statement does not teach anything at all, and certainly does not

teach the development of Server Farms, Metafarms and the various disk and tape requirements necessary for them, especially for each site and each Server Farm.

REGARDING APPLICANTS' CLAIM 2: Applicants' claim 2 is dependent upon claim 1, and develops greater details of step (a) of claim 1. As was indicated in Applicants' claim 1, the cited references stated by Examiner did not teach the elements of clause (a) of claim 1. Thus, likewise, the detailed actions shown in claim 2 likewise could not be taught by Blumenau, ---- actions such as retrieving data from a customer profile, retrieving each user type involved in each Server Farm, retrieving each application program name used by each user type in each Server Farm, and retrieving the required amount of disk capacity required for each user type involved in the use of each application program. None of these specific items are taught by the cited paragraphs of the Blumenau reference.

REGARDING APPLICANTS' CLAIM 8: This claim depends on claim 2, and further elucidates the activity of clause (a).

8(i): The Examiner has cited Blumenau column 5, lines 5-10 in respect to Applicants' clause (a5). Here, column 5 of Blumenau, lines 5-10 involves a Fig. 22 which illustrates a management window showing a fourth step in the configuration process of Fig. 18 for configuring access to a specific storage volume on a storage system using a specific port of a storage system and a specific port on a host system.

As will be obvious from this particular statement of Blumenau, there is nothing to indicate Applicants' clause (a5) for

calculating the required amount of memory capacity for each Server Farm. Blumenau merely speaks of <u>access to a "storage volume"</u>, but does not involve the calculation of necessity of a certain amount of memory capacity for each Server Farm.

Here, Examiner has cited column 6, lines 35-60, regarding Applicants' clause (a5). Here, Blumenau talks about a data management aspect of his Fig. 1C, where a host-storage system configuration is shown where the storage system includes two ports which interface the storage system to a different network. . . . Blumenau configures volumes of data at the storage system 20 according to the identity of the host devices coupled to the storage system. The configuration data is used to manage the allocation of volumes to different hosts . . . by a system administrator of the network.

As can be seen, this does not teach any means for calculating the necessity for and required amount of memory capacity for each Server Farm.

In regard to Applicants' claim 2 clause (a6), the Examiner has cited Blumenau column 30, lines 1-20: Here, Blumenau discusses his Fig. 14 and a file pull-down menu which can include run tasks option to execute queued operation, such as adding or deleting access of a host/HBA pair to one or more storage volumes . . . and a report option that generates a report for selected

network device for storage volume. The report option may be used to generate information detailing the configuration of the storage network or the configuration of a particular device or volume. . . .

> As will be noted, this does not teach Applicants' claim 2, clause (a6) for developing a base solutions report having a base solution which indicates the number of Server Farms, the number of Servers in a Farm, plus the disk and memory requirements for each Server Farm.

Examiner cites column 18 lines 9-25, regarding Applicants' claim 2, clause (a6): Here, Blumenau discusses a command line interface that is provided to query the availability and assignment of data storage volumes to different hosts in the network.

> Here, it should be noted that Applicants are not involved with handling merely storage networks. Applicants are involved with, as stated in clause (a6), developing a base solutions report with a base solution indicating the number of Server Farms, the number of Servers in a Farm, plus the disk and memory requirements for each Server Farm.

Now, in regard to the other dependent claims of Applicants', such as claim 3, 4, 5, 6, 7, 9 and 10, it will be noted that there are no specific teachings in the Blumenau reference which handles:

(i) the calculating of disk capacity requirements for a single Farm, the calculating of the actual user weight, or each user type operating with each application program,

(ii) the calculating of the actual user weight, or each user type operating with each application program;

(iii) the usage of a specialized server information database for server data,

(iv) the calculation for each Server Farm to develop the adjusted total number of users, and to calculate the required data transmission capability in kilobits per second,

(v) to calculate the number of servers needed to service the customers' configuration,

(vi) the calculation of a set of default availability levels, and

(vii) a display of the network capacity report for the entire network solution to cover the particularly designed optimized basic solution for the optimized Server Metafarm for the particular customer.

Likewise, in regard to Applicants' claim 11, which has been amended to change the word "proposal" to read "proposed", it will be noted that the elements of clauses (a) through (f), involve a specific type of operation for Server Farms, and the peculiar aspects thereof, which can be seen, are not taught by the Blumenau reference, which merely involves managing the availability and assignment of data in a storage system that is coupled to a network.

This type of problem in Blumenau is not representative of the problems handled by Applicants' configuration.

In view of the amendments to the claims and in regard to the discussion of the various aspects of the Blumenau* reference, it is respectfully requested that Examiner view the aspects of Applicants' configuration which are not taught in any specific or generalized way by the Blumenau reference so that Examiner may appreciate the operability of Applicants' handling for the development of Server Farms or Metafarms. Upon recognition of this overall solution for handling a customer's profile, it should be seen that a valuable aspect has been developed and it is requested that a timely Notice of Allowance be provided for the extant claims.

* *See attached Appendix I*

Respectfully submitted,

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Certificate of Mailing (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: *November 10, 2004*

Patti S. Preddy

APPENDIX I

1.   The Blumenau U.S. Patent 6,665,714 was cited as Reference "A" to USSN 09/813,670.

2.   The Blumenau title is "Method and Apparatus for Determining an Identity of a Network Device". This is assigned to EMC Corporation.

3.   It should be noted that Blumenau states that it is directed to a method and apparatus for "managing storage" in a storage system.

4.   This involves networked computer systems which involve multiple hosts coupled over a network to a shared data storage system. Fibre channel is a network standard that allows multiple initiators to communicate with multiple targets over the network. Multiple hosts are able to share access to a single storage system.

> One problem with coupling multiple hosts to a shared storage system is the management of data access at the storage system. Blumenau has multiple hosts which have access to a common storage system, each host may be able to access information that may be proprietary to only certain ones of the other host processors.

> Each host is "trusted" to access only those portions of memory for which it has privileges. This is vulnerable to the individual action of each host. As a result, such a data management method may not be sufficient to protect data from unprivileged access—this is the crux of the problem involved in Blumenau!

BRIEF SUMMARY (*Blumenau*):

A method and apparatus is provided for managing the availability and assignment of data in a storage system coupled to a network. A user interface is provided that executes only on a host processor that is coupled to the storage system over the network.

The user interface communicates with a configuration database in the storage system to identify host processors that are logged into the storage system over the network --- to identify storage volumes on the storage system --- to identify whether access to particular storage volume on the storage system is permitted from a particular host processor --- and to identify a network path by which host processors are logged into the storage system over the network.

In one embodiment, a Graphical User Interface is provided which can graphically represent host processors, host bus adapters, storage systems, storage system adapters, and storage volumes on the storage system.

The graphical representation provided by the Graphical User Interface permits a user to graphically view a topology of a network at varying levels of detail selectable by the user.

The Graphical User Interface permits a user <u>to allow or deny access to storage systems</u> where a particular storage volume in storage systems may be accessible from one or more of the host processors—by selecting and manipulating graphical representations thereof.

Now, here is Blumenau claim 1 as a summary:

A method of enabling an application program, executing on a host computer that comprises a first network device, to determine a pre-assigned network identity of the first network device, the first network device being coupled to at least a second network device by a network, the method comprising the steps of:

(a) sending a first communication from the first network device to the second network device over the network, the first communication identifying to the second network device the pre-assigned network identity of the first network device;

(b) requesting the second network device to identify, to the host computer, the pre assigned network identity of the first network device identified in the first communication;

(c) receiving, at the host computer, a second communication from the second network device identifying the pre-assigned network identity of the first network device identified in the first communication; and

(d) communicating to the application program executing on the host computer, the pre-assigned network identity

of the first network device identified in the second communication.

It would be difficult to comprehend how this Blumenau reference could be cited as having the ability to configure a network of server farms and how it could teach any means to optimize the various parameters in each Server Farm in order to make an optimum Server Farm configuration to suit a customer's profiled requirements.

IN THE DRAWINGS:

See the attached new Fig. 3 which is to replace the original Fig. 3.